



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/526,886

03/04/2005

Shridhar Mubaraq Mishra

1890-0211

7354

50255

7590

11/12/2008

MAGINOT, MOOR & BECK
111 MONUMENT CIRCLE, SUITE 3000
BANK ONE CENTER/TOWER
INDIANAPOLIS, IN 46204

EXAMINER

ELPENORD, CANDAL

ART UNIT

PAPER NUMBER

2416

MAIL DATE

DELIVERY MODE

11/12/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/526,886	Applicant(s) MISHRA ET AL.	
	Examiner CANDAL ELPENORD	Art Unit 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on July 14, 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-29 is/are pending in the application.
- 4a) Of the above claim(s) 16-19, 23-25, 28 and 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15, 21, 22, 26 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 14 July 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>June 13, 2005</u> . | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments with respect to claims 15, 20-22, 26-27 have been considered but are moot in view of the new ground(s) of rejection.
2. Claims 15, 22 have been amended and claim 28-29 have been canceled.

The Applicants alleged "the Examiner has not established a teaching, suggestion or motivation for combining the references, the Examiner has not established that the proposed resultant combination would have predictable to one of ordinary skill in the art".

In response, the Examiner respectfully disagrees with the applicant assertion because the test for obviousness is not whether or not the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. **Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.** See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case the Examiner asserts that combination of Tuck, III '306 and Yazaki '197 when considered as whole clearly teaches the applicant claimed invention.

To summarize, incorporating the teaching features of Yazaki '197 into the teaching features of Tuck '306 would produce a working system. In other words, implementing the teaching features of Yazaki '197 would not destroy the system, method of Tuck '306. The Examiner maintained that an analysis of obviousness was established in the prior office actions.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. **Claims 15, 21-22, 26-27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuck et al (US 2002/0152306 A1) in view of Yazaki et al (US 2003/0012197 A1).

Regarding claims 15, 22, Tuck, III '306 discloses a data switch (fig. 2, see Switching Fabric with Processing circuitry for processing incoming packets, recited in paragraph 0031) for passing packets, as sets of one or more packet flows (noted: forwarding of packets from input modules to output modules, recited in paragraph 0031) between a plurality of ports (fig. 1, Switching nodes in combination with fig. 2, Switching Fabric in combination with the processing circuitry, see plurality of input ports such as 20-1 to 20-n and output ports such as 21-1 to 21-n, where the incoming data packets are output, recited in paragraphs 0028, 0031) the data switch (fig. 2, see Switching Fabric with Processing circuitry for processing incoming packets, recited in paragraph 0031), comprising: a flow detection device (fig. 3, Processing Circuitry 35 in combination with the Policing Circuit 35, "monitoring of the data on the link", recited in paragraph 0032) configured to detect a set of one or more packet flows to which each packet belongs (Noted: method and apparatus for monitoring of data traffic and where the data are transferred in data packets, recited in abstract and paragraphs 0012, lines 1-7); a bandwidth monitoring device (fig. 3, Policing Circuit 26, "monitoring of the data traffic on the link", recited in paragraphs 0032-0033) having a RAM memory (fig. 3, see, plurality of memory locations such as SRAM 56, SRAM 58, SRAM 60, recited in paragraph 0038, lines 1-7) with a section (fig. 3, SRAM 56) corresponding to each set of one or more packet flows (noted: each memory stores for each link and class of service upon

Art Unit: 2416

receipt of data packet, recited in paragraph 0038), the memory sections (fig. 3, SRAM 56, 60, 59 couples to the counter) each containing a bandwidth counter for the corresponding set of one or more packet flows (fig. 3, Counter 32 couples to the packet processing circuitry in combination with the Derivation circuit in combination with the comparison circuit, SRAM memory sections 56, 60, “to determine whether data packets received on the various links and classes have caused the allowable data rates to be exceeded”, recited in paragraph 0041), the bandwidth monitoring device (fig. 3, Policing Circuit 26, “monitoring of the data traffic on the link”, recited in paragraphs 0032-0033) being configured to: subtract the size of the packet from a value of the bandwidth counter corresponding to the detected set of one more packet flows to obtain an adjusted value (noted: subtracting of the present counter value from the present bucket contents, recited in abstract, lines 4-12), and to issue a policing instruction (fig. 3, Policing Circuitry 26, Noted: marking of the incoming packet according to the adjusted value, recited in abstract, lines 4-20, noted: “multistage policing so that multiple discard eligibility can be assigned”, recited in paragraph 0016, noted: marking of the packets based on the updatable adjusted value, paragraphs 0012-0013,) if the adjusted value is equal to or lower than a first predetermined levels corresponding to a first set of one or more flows and a second predetermined level, different from the first predetermined level, corresponding to a second set of one or more flows (noted: marking of the incoming packet with respect to allowable data rate based on first and second predetermined thresholds, paragraphs 0016, 0035-0038, noted: bucket contents threshold associated with the counter, recited in abstract, lines 1-21, paragraph 0048)

Art Unit: 2416

replace the value of the bandwidth counter corresponding to the detected set of one or more packet flows by the adjusted value in the event that the packet is transmitted by the switch (noted: the adjustable updatable value is used to update the updatable value, recited in paragraphs 0013, 0048); wherein the one or more predetermined levels include a first predetermined level corresponding to a first set of one or more flows and a second predetermined level (noted: each memory (noted: (fig. 3, SRAM 56, 58, 60) stores of predetermined threshold for each class of service of a new packet, recited in paragraph 0038), different from the first predetermined level (noted: three predetermined threshold values with respect to the number of units of data, recited in paragraphs 0037, 0038, 0039), corresponding to a second set of one or more flows (noted: three predetermined threshold values with respect to the number of units of data, recited in paragraphs 0037, 0038, 0039); and wherein the RAM memory includes control parameter indication portions for each of the sets of one or more flows (noted: threshold values associated with the bucket, recited in paragraph 0039, 0036), the control parameter indication portions indicating respective registers (fig. 3, SRAM memory locations 56, 58 and 60, recited in paragraph 0038) for storing the data representative of the one or more predetermined levels (noted: three predetermined threshold values with respect to the number of units of data, recited in paragraphs 0037, 0038, 0039, "stores of predetermined threshold in each memory location", recited in paragraph 0038).

Regarding claims 21, 27, Tuck, III '306 discloses the data switch (fig. 2, see Switching Fabric with Processing circuitry for processing incoming packets, recited in

Art Unit: 2416

paragraph 0031), wherein each set of one or more flows (noted: number of data units in packets, recited in paragraph 0012) is associated with one of a plurality of policing the plurality of policing instructions (noted: "multistage policing so that multiple discard eligibility can be assigned", recited in paragraph 0016) including dropping a packet (Noted: discarding of packet due to excess traffic or congestion or discarding when the threshold is exceeded", recited in paragraph 0015, and reducing a priority packet (noted: increasing the discard eligibility of the packet if the packet causes threshold to be exceeded, recited in paragraph 0015).

Regarding claim 22, please see the Examiner comments with respect to claims 15 as discussed above.

Regarding claim 27, please see the Examiner comments with respect to claim 21.

Tuck '306 discloses all the claimed limitations with the exception of being silent about the claimed features:

Regarding claim 15, subtract the size of the packet from a value of the bandwidth counter corresponding to the detected set of one or more packet flows to obtain an adjusted value; replenish each bandwidth counter with a predetermined value at regular intervals.

However, Yazaki '197 from the same field of endeavor discloses the above claimed features:

Regarding claim 15, subtract the size of the packet from a value of the bandwidth counter (noted: leaking the water quantity in the bucket out upon arrival of

Art Unit: 2416

cells (i.e. packets or PDU), paragraphs 0070, 0071, see, “subtracting the leaked water quantity from the bucket”, paragraph 0081) corresponding to the detected set of one or more packet flows (fig. 5, Flow Detector 30 communicatively coupled to Bandwidth Monitor 40 with means for identifying bundle of packet flows, paragraphs 0050, 0058, 0061) to obtain an adjusted value (noted: determining the water quantity in the bucket, paragraph 0081); replenish each bandwidth counter with a predetermined value at regular intervals (noted: adding the value to the quantity of water remaining in the bucket at elapsed time periods, paragraphs , 0076, 0081-0082).

In view of the above, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching features of Tuck '306 by using features as taught by Yazaki '197 in order to provide bandwidth monitoring of packet flows as suggested in paragraph 0018, lines 1-6, paragraph 0019 for motivation.

Tuck '306 discloses all the claimed limitations as set forth above with the exception of being silent about the claimed features:

Regarding claims 20, 26, wherein the plurality of sets of one or more flows are grouped into ranges, and wherein the policing instructions in respect of a particular set of one or more flows depends upon the range in which the set of one or more flows lies.

However, Yazaki '197 from the same field of endeavor discloses the above claimed features:

Regarding claims 20, 26, wherein the plurality of sets of one or more flows are grouped into ranges (fig. 6 in combination with fig. 7, see bundle of packet flows using identifiers, paragraphs 0061-0067), and wherein the policing instructions in respect of a

Art Unit: 2416

particular set of one or more flows depends upon the range in which the set of one or more flows lies (noted: the bandwidth monitoring discard of packets that violate the contracted bandwidth, paragraphs 0052-0053, 0073-0077).

In view of the above, having the apparatus and method for monitoring a data flow at switching nodes of Tuck, III '306 and then the well-established teaching of Yazaki '197, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the features of Tuck, III '306 by using features as taught by Yazaki '197 in order to provide bandwidth monitoring of packet flows as suggested in paragraph 0018, lines 1-6, paragraph 0019 for motivation.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Skirmont et al (US 6,252,848 B1).

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

Art Unit: 2416

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CANDAL ELPENORD whose telephone number is (571)270-3123. The examiner can normally be reached on Monday through Friday 7:30AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Bin Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Candal Elpenord/

Application/Control Number: 10/526,886
Art Unit: 2416

Page 11

Examiner, Art Unit 2416

/Kwang B. Yao/

Supervisory Patent Examiner, Art Unit 2416